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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/776,872	02/10/2004	Bao Ha	Serie 5545	3882

7590 03/11/2005

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EXAMINER	
ANDREWS, MELVYN J	

ART UNIT	PAPER NUMBER
1742	

DATE MAILED: 03/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/776,872	HA ET AL.	
	Examiner	Art Unit	
	Melvyn J. Andrews	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 13 to 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ha et al (US 6,508,053). Ha et al discloses an air separation unit 1 as shown in Fig.3

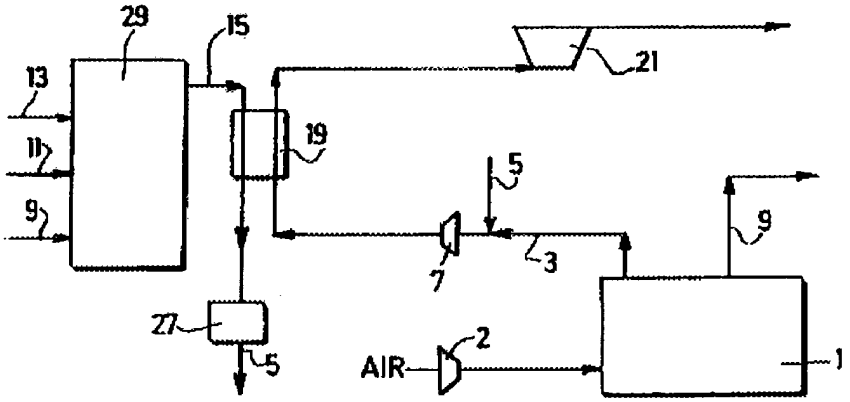


FIG.3

which is equivalent to the claimed system comprising an air separation unit as in Claim 1 which is the only apparatus claimed since the remainder of the Claims 13 -17 recite process limitations which do not further limit the claimed air separation unit structurally but apparatus claims must be structurally distinguishable from the prior art MPEP 2114.

Also Ha et al disclose a system comprising an air separation unit (col.5, lines 30 to 33), which suggests the claimed system comprising an air separation unit thereby showing all aspects of the above claims since the manner or method of use of an apparatus (in this case air mixed with an oxygen mixed product is fed to a blast furnace and a second gas from the air separation unit is heated and expanded to recover energy) cannot be relied upon to fairly further limit claims directed to the apparatus itself. *In re Casey, 152 USPQ 235.* MPEP 2115

Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brugerolle et al (US 6,568,207). Brugerolle et al disclose an air separation unit **A** as shown in FIG.1

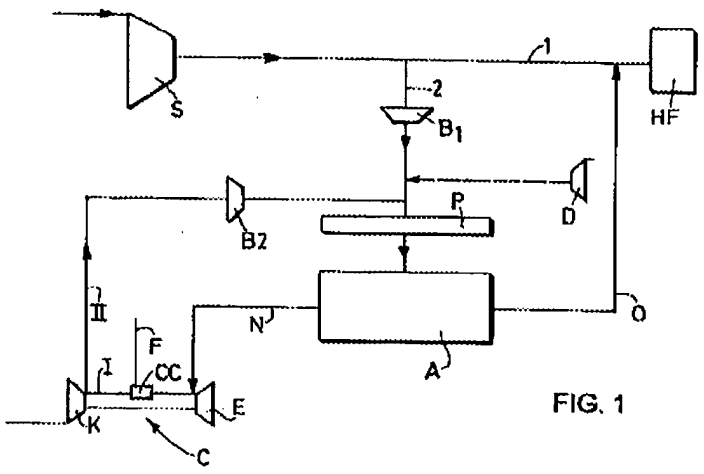


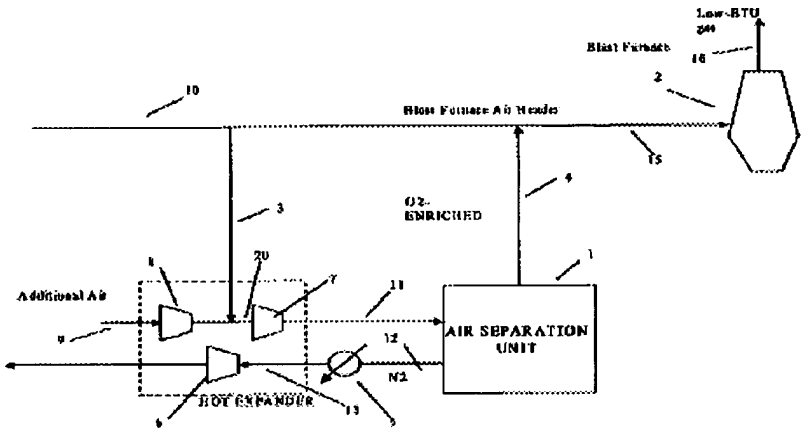
FIG. 1

which is equivalent to the claimed system comprising an air separation unit as in Claim 1 which is the only apparatus claimed since the remainder of the Claims 13 -17 recite process limitations which do not further limit the claimed air separation unit structurally but apparatus claims must be structurally distinguishable from the prior art MPEP 2114.

Also Brugerolle et al disclose a system comprising an air separation unit **A** (col.1, lines 44-46) which suggests the claimed system comprising an air separation unit thereby showing all aspects of the above claims since the manner or method of use of an apparatus (in this case air mixed with an oxygen mixed product is fed to a blast furnace and a second gas from the air separation unit is heated and expanded to recover energy) cannot be relied upon to fairly further limit claims directed to the apparatus itself. *In re Casey, 152 USPQ 235.* MPEP 2115

Claims13 to 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ha et al (US 6,692,549). Ha et al discloses an Air Separation Unit 1 as shown in Figure 1

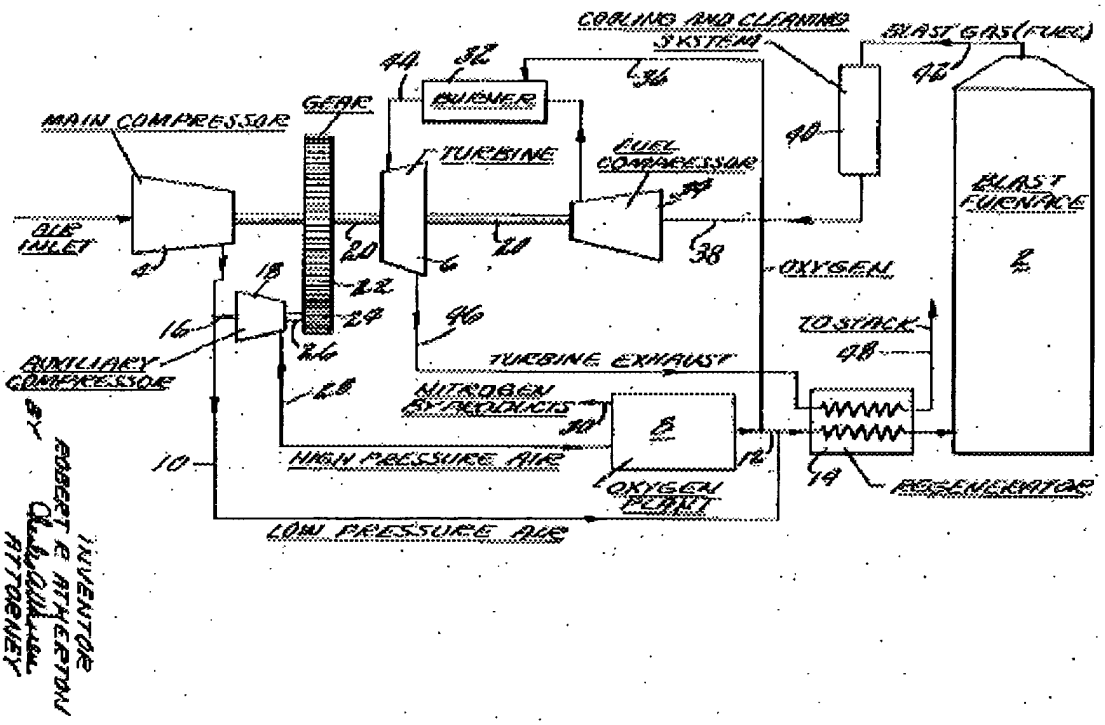
Figure 1



which is equivalent to the claimed system comprising an air separation unit as in Claim 1 which is the only apparatus claimed since the remainder of the Claims 13 -17 recite process limitations which do not further limit the claimed air separation unit structurally but apparatus claims must be structurally distinguishable from the prior art MPEP 2114

Ha et al discloses a system comprising an Air Separation Unit 1 (col.4, lines 2-23), which suggests the claimed system comprising an air separation unit thereby showing all aspects of the above claims since the manner or method of use of an apparatus (in this case air mixed with an oxygen mixed product is fed to a blast furnace and a second gas from the air separation unit is heated and expanded to recover energy) cannot be relied upon to fairly further limit claims directed to the apparatus itself. See *In re Casey, 152 USPQ 235.* MPEP 2115

Claims 13 –17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atherton discloses an oxygen plant 8 which is of conventional construction in which high pressure air is separated into oxygen and nitrogen components of air , the system for separating high pressure air is old and well known (col.1, lines 39 to 56) as shown in the Figure



which is equivalent to the claimed system comprising an air separation unit as in Claim 1 which is the only apparatus claimed since the remainder of the Claims 13 -17 recite process limitations which do not further limit the claimed air separation unit structurally but apparatus claims must be structurally distinguishable from the prior art MPEP 2114

Atherton discloses a blast furnace supply system comprising an oxygen plant 8, which suggests the claimed system comprising an air separation unit thereby showing all aspects of the above claims since the manner or method of use of an apparatus (in this case air mixed with an oxygen mixed product is fed to a blast furnace and a second gas from the air separation unit is heated and expanded to recover energy) cannot be relied upon to fairly further limit claims directed to the apparatus itself. See *In re Casey, 152 USPQ 235.* MPEP 2115.

Double Patenting

Claims 13 to 17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-16 of U.S. Patent No. 6,508,053. Although the conflicting claims are not identical, they are not patentably distinct from each other because the '053 system comprising an air separation unit suggests the claimed apparatus which is a system comprising an air separation unit.

Claims 13 to 17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 10-16 of U.S. Patent No. 6,568,207 Although the conflicting claims are not identical, they are not patentably distinct from each other because the '207 system comprising an air separation unit suggests the claimed apparatus which is a system comprising an air separation unit.

Claims 13 to 17 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-12 of U.S. Patent No.6,692,549. Although the conflicting claims are not identical, they are not patentably distinct from each other because the '549 process for integrating a blast furnace and

an air separation unit suggests the claimed apparatus which is a system comprising an air separation unit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvyn J. Andrews whose telephone number is (571)272-1239. The examiner can normally be reached on 8:00A.M. to 4:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V King can be reached on (571)272-1244. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Melvyn Andrews

MELVYN ANDREWS
PRIMARY EXAMINER

MJA
February 28, 2005